CMM/475/84

International
Marketing Information
Series

Country Market Survey

Mini and Micro Computer Systems

Italy

NEWARK PUBLIC LIBRARY
MAR 3 1986
U.S. GOVT. PUBS.
DEPOSITORY 345

U.S. DEPARTMENT OF COMMERCE
International Trade Administration

119

Italy

CMS/CMM/475/84, December 1985

CMS

Despite an economic slowdown that has stalled the automation programs of many small and medium-sized companies, the Italian market for mini and micro computer systems is expected to climb to $2.2 billion by 1987[1] (see table 1 and figure 1). In contrast to the more mature market for mainframes, which now consists mostly of replacement buying, the 17 percent average growth over 1983 sales projected for minis and micros reflects the dynamism of microcomputer technology and its increased accessibility to users in all parts of Italy's economy (see figure 2).

Direct shipment from American manufacturers amounted to some $219 million in 1983, and this figure only hints at the magnitude of the U.S. presence (see table 2). American companies ship to the Italian market from numerous European plants and also operate local manufacturing subsidiaries. IBM, for example, recently announced plans to build a factory in Italy for the PC. By 1987, direct shipments from the States are forecast to hit some $335 million.

The sharply improved price/performance ratios of all kinds of computers have both positive and negative effects on the market for **minicomputers.**

- Fastest growth is anticipated for **upper level** machines, from $645 million in 1983 to $1.09 billion in 1987. With the latest round of technical advances, these high performance minicomputers now handle tasks traditionally assigned to mainframes.
- **Lower level minicomputers,** on the other hand, face stiff competition from increasingly powerful micros. Still, thousands of Italian users are expected to find these lower-priced minis the right computer for them, boosting unit sales from 15,000 in 1983 to 23,000 in 1987.

Rapid expansion characterizes most segments of the **microcomputer** market, with best prospects foreseen for the upper level products oriented to business and professional use.

- The number of upper level **business/desktop** units has skyrocketed; the sixfold expansion from 1981 to 1983 is forecast to be followed by a trebling, to 45,000 units in 1987. Offering attractive solutions to the management problems of Italian organizations at a reasonable cost, business micros have further been boosted by Olivetti's entry into this market.
- Massive advertising and promotional campaigns to attract potential Italian users of **transportable/professional** microcomputers are paying off: the market is forecast to expand some 28 percent yearly, to $190 million in 1987. Professionals in particular are expected to use these machines in the office, at home, and for educational applications.

Table 1.—Italy: The market[1] for mini and micro computer systems[2], 1983 and projected 1987
(in millions of U.S. dollars)

	1983	1987
Minicomputers — upper level		
Production	369	630
Imports	362	580
Exports	86	120
Market size	645	1,090
Minicomputers — lower level		
Production	459	700
Imports	89	130
Exports	263	400
Market size	285	430
Microcomputers — desktop/business		
Production	125	305
Imports	65	195
Exports	60	75
Market size	130	425
Microcomputers — transportable/professional		
Production	20	85
Imports	55	130
Exports	5	25
Market size	70	190
Microcomputers — home/hobby		
Production	—	—
Imports	35	65
Exports	—	—
Market size	35	65
Peripherals — auxiliary storage equipment[3]		
Production	323	910
Imports	79	165
Exports	192	530
Market size	210	545
Peripherals — input and output devices[3]		
Production	245	500
Imports	70	110
Exports	125	240
Market size	190	370
Peripherals — data communications equipment[3]		
Production	27	60
Imports	10	30
Exports	2	5
Market size	35	85
Totals		
Production	1,568	3,190
Imports	765	1,405
Exports	733	1,395
Market size	1,600	3,200

[1] Size of market equals production (ex factory value) plus imports (c.i.f.) minus exports (f.o.b.). Figures include leased equipment counted at its market value as if sold outright in the initial year of lease. Parts are not included.

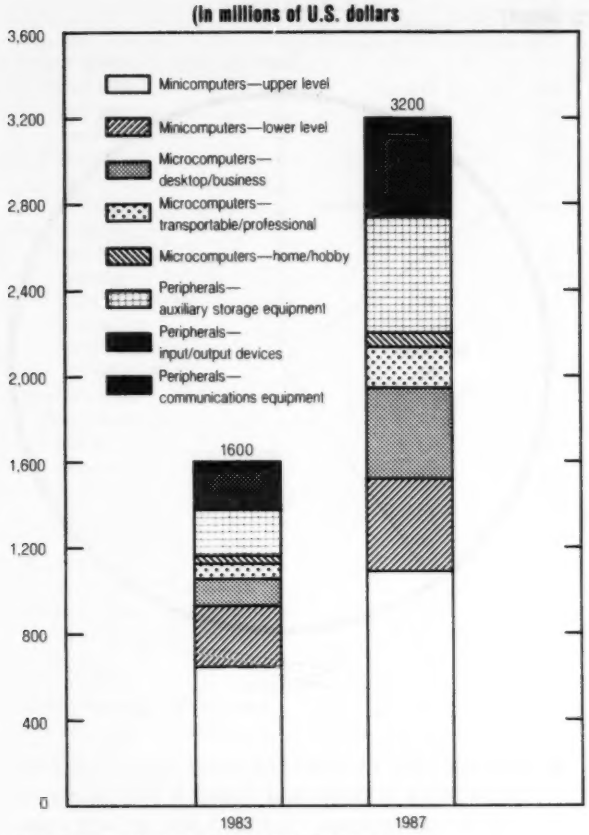
[2] Computer size is based on purchase price, as follows: upper level minicomputers, more than $50,000; lower level minicomputers, $10,000-$50,000; desktop/business microcomputers, $5,000-$10,000; transportable/professional microcomputers, $1,000-$5,000; and home/hobby microcomputers, less than $1,000.

[3] Excluding equipment sold as components of integrated computer systems.

Source: International Trade Administration, U.S. and Foreign Commercial Service research report, "The Market for Mini and Micro Systems in Italy" (see Additional Information box). Figures in this report are based on data gathered in Italy, including available government statistics, industry reports, and trade source estimates and projections.

[1] All values are shown in U.S. dollars. Local currency data for all years are converted at the exchange rate of US$1 = 1,518.7 Italian lires. Values for years through 1983 are expressed in current rather than constant dollars/prices; values for 1984 and subsequent years are expressed in 1983 constant dollars/prices.

Figure 1
Italy: The market for minicomputers, microcomputers, and peripherals, 1983 and 1987
(in millions of U.S. dollars



Source: International Trade Administration, Office of Trade Information Services research report.

- The market for **home/hobby microcomputers,** which has the volatility characteristic of a consumer goods market, is currently enjoying a surge of interest. Growth is expected to slow, however, after peaking at $75 million in 1985. Coupled with falling prices, this should lead to a decline in the market, to $65 million in 1987.

Italian demand for mini and micro **peripherals** follows the trend of the overall market. Despite sales projections that show threefold growth in purchases of micro peripherals and only a doubling for mini peripherals, the latter market will still be 50 percent larger than microcomputer peripherals in 1987.

- The biggest gains for both minis and micros are forecast for **auxiliary storage** devices, which are expected to make up 54 percent of the peripherals market in 1987. Underlying the projected gains are growth in the overall computer population and the increased need expressed by users for online storage.
- Strong demand for printers and display terminals propels the market for **input/output** devices. Forecasts show 18 percent increase in annual sales to $370 million in 1987.
- Starting from a small base, purchases of **data communications peripherals** are forecast to reach some $85 million by 1987. Growth is slowed by the legal requirement that all modems be installed by SIP, the state-run telephone company. Networking is still in the experimental stage, but strong interest is developing among banks and manufacturers. Local area networks are forecast to expand in the near future, but few are currently in operation.

Competitive Environment

The domestic industry, led by Olivetti and the subsidiaries of big U.S. computer makers, has a strong presence in the market. Local production, valued at some $1.57 billion in 1983, supplied over half the market while also generating exports worth $733 million. A gain is predicted in the domestic industry's share of output, but foreign-sourced shipments will still make up nearly 46 percent of the market in 1987.

U.S. suppliers.—American companies dominate the market, both with direct shipments and through their subsidiaries in Italy and the rest of Europe. U.S.-sourced imports accounted for almost 29 percent of total purchases from abroad in 1983, but a decline is predicted as American multinationals choose to supply more of the market from Italian and European plants. By 1987 U.S. firms are foreseen supplying some 31 percent of imports.

American companies do well in virtually all market segments but are especially strong in the upper end of the market. IBM, Honeywell, Digital, and Data General all rank among the 5 leading suppliers of minis to the Italian market, while Hewlett-Packard, Texas Instruments, and Burroughs are also in the top 10.

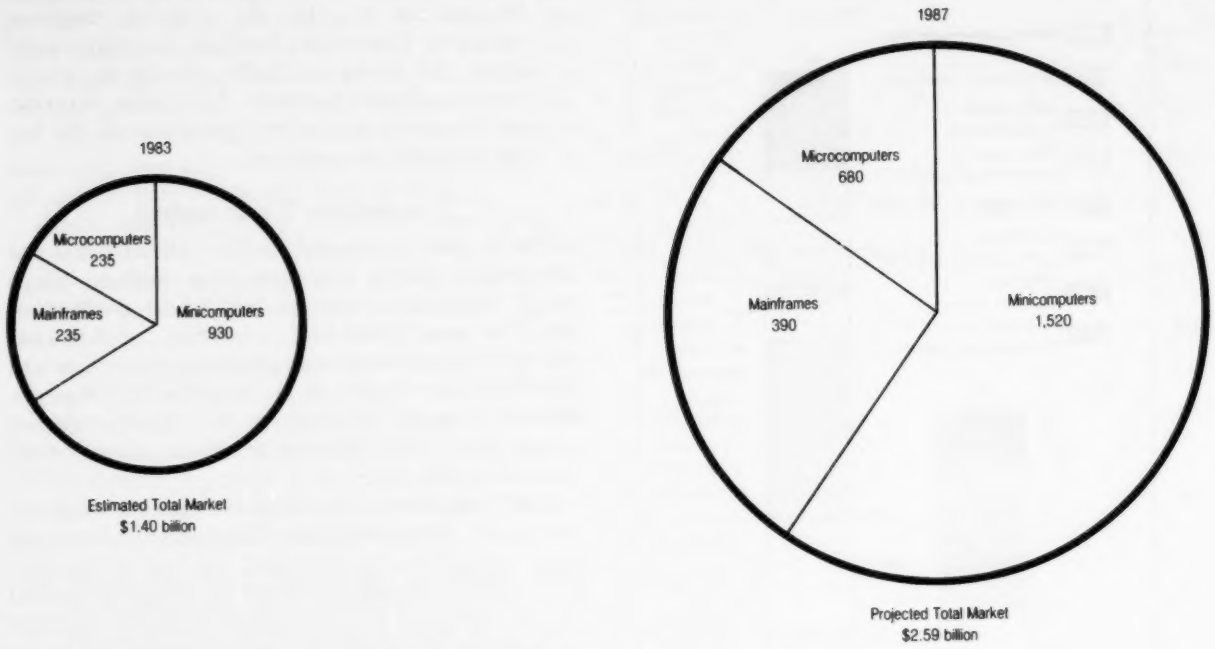
Imports from the United States figure prominently in the market for desktop/business and transportable/professional micros, with IBM and Apple among the market leaders. Growth in these shipments is likely to decline, however, once local production of the IBM PC gets into full swing.

Italian purchases of home/hobby micros and all kinds of peripherals from U.S. sources are less substantial, totaling $31 million in 1983. Nevertheless, Commodore has done very well with its low-cost computers, and peripheral vendors are expected to boost their sales to $40 million in 1985, representing annual growth of more than 24 percent.

American manufacturers strength lies in their technological edge, sales and marketing policies, servicing, and technical applications support. Italian buyers also appreciate the availability of software for a vast range of needs and applications.

Domestic suppliers.—The local industry consists of about 20 hardware manufacturers, employing about 37,000 workers in 1982. Just three firms, however,

Figure 2
Italy: The market for minicomputers, microcomputers, and mainframes, 1983 and 1987
(in millions of U.S. dollars)



Source: International Trade Administration, Office of Trade Information Services research report.

account for the lion's share of output. While production is expected to keep pace with growth in the overall market, trade sources note that the industry's development has been hampered by several factors:

- Lack of guidelines focused on development of the information industry.
- Lack of adequately trained personnel for hardware and software production.
- Uneven penetration of computer use into various sectors of the economy.
- Lack of venture capital.
- Poor integration of academic and industrial scientific research.

The three firms that dominate the Italian industry are domestically-controlled Olivetti and the U.S.-owned subsidiaries of IBM and Honeywell Information Systems.

- Olivetti makes a full range of office automation and information processing equipment but does particularly well in the market for smaller minicomputers. It ranks second only to IBM in the number of minicomputers installed and also has been instrumental in developing the local market for microcomputers. Current R&D efforts focus on minicomputers featuring modular architecture, fifth generation computers, and automation based on personal computer workstations.
- IBM Italy has two local factories which make the 23/34/36/38 systems and Series 1 computers, as well as peripherals. Some 3,600 of the company's 12,600 employees are involved in the manufacture of computers. Local R&D facilities consist of a software development center and two scientific centers.
- Honeywell ISI, the Italian subsidiary of Honeywell Information Systems, has full worldwide responsibility for part of the Honeywell product range. It manages the design, production, marketing, and servicing of medium-small systems (DPS 4 mini and 6/20 micro) as well as matrix serial printers (S and L range). Research is done at Honeywell's Breganze facility, one of Italy's leading design organizations in electronics.

In the past, the Italian industry received little support from the Government. A number of programs designed to promote computer hardware and software development did little more than pay lip service to the need to promote high-tech industries. However, substantial interest is being aroused by current research initiatives to promote R&D in minis and micros. In addition, Italy's IMI and Innovation Funds have helped a number of firms, including Olivetti, finance the industrialization and marketing of new computer products.

Table 2.—Italy: Imports of mini and micro computer systems by leading supplier countries, 1983 and projected 1985
(in millions of U.S. dollars)

	1983	1985
Minicomputers — upper level		
United States	110	160
Germany	95	130
United Kingdom	72	100
France	43	55
Other	42	5
Total	362	450
Minicomputers — lower level		
United States	26	35
Germany	25	30
United Kingdom	18	25
France	11	10
Other	9	5
Total	89	105
Microcomputers — desktop/business		
United States	32	50
Ireland	13	35
Germany	11	20
France	6	15
Other	3	10
Total	65	130
Microcomputers — transportable/professional		
United States	20	40
The Netherlands	27	35
Other	8	15
Total	55	90
Microcomputers — home/hobby		
United States	5	10
Germany	14	30
United Kingdom	13	25
Other	3	10
Total	35	75
Peripherals — auxiliary storage equipment		
United States	9	15
Germany	25	35
The Netherlands	16	25
United Kingdom	8	10
Other	21	15
Total	79	100
Peripherals — input and output devices		
United States	11	15
United Kingdom	24	35
The Netherlands	16	30
France	13	15
Other	6	—
Total	70	95
Peripherals — data communications equipment		
United States	6	10
Other	4	10
Total	10	20
Grand Total	765	1,065
Total from the United States	219	335

Source: See source notation of table 1.

Major Buyers

The development of microcomputers continues to open new user sectors to the benefits of computerization. Institutional buyers are likely to dominate the market through 1987, despite sharply higher sales of microcomputers to consumers and professionals (see table 3).

With expenditures of $370 million in 1983, manufacturers represent the largest single market for both minis and micros, a distinction they are likely to retain. Financial institutions, too, have consistently shown strong demand. Impressive future growth is also expected in purchases by the retail and wholesale sectors and by Italy's Government, which has been the slowest sector to adopt computerization in the past.

- In the manufacturing industries, growing computerization of smaller firms and a broadbased trend to decentralization is expected to generate strong demand for both minis and micros.
- Banks and insurance companies, despite an already high level of automation, continue to invest in large-scale systems employing massive numbers of online terminals as well as minicomputers for remote processing. Carefully planned automation is considered a key to strategic development among financial institutions and insurance firms, which have shown tremendous interest in such office automation concepts as integrated word processing, electronic mail, and information retrieval.
- Consumers, following the current fashion of home computers, are expected to remain among the largest buyers of microcomputers for games and a growing array of more serious applications. About 3 percent of Italy's 17 million families are expected to have home computers by 1987.
- Among retailers and wholesalers, most of the larger firms have already become automated. The sector remains a dynamic one, however, based on the interest of thousands of small retail operations who are just beginning to embrace computer methods.

Market Access

Most large firms supply the Italian market through their own sales organizations, though smaller companies sometimes use well-established domestic distributors.

- Minis are usually sold direct or by way of systems and software houses.
- Both foreign and domestic vendors market microcomputers through networks of specialized computer shops. Less specialized retail outlets, such as audio equipment and appliance stores, have proved unsatisfactory, since they rarely provide the essential ingredient of customer assistance. Large organizations often make volume purchases of micros direct from the manufacturer or distributor.

Trade and technical regulations tend to conform to those elsewhere in Europe. The European Economic

Community's common external tariff of 5.7 percent applies to U.S.-sourced computer hardware. U.S. technical standards for computers are acceptable. However, metric weights and measures are mandatory, and electric power is 220/380 volts, 50 hertz, single or 3-phase.

Table 3.—Italy: Expenditures[1] for mini and micro computer systems by major institutional and professional/consumer sectors, 1983 and projected 1987

	Minicomputers				Microcomputers			
	1983		1987		1983		1987	
	Number of units	Value ($ millions)	Number of units	Value ($ millions)	Number of units	Value ($ millions)	Number of units	Value ($ millions)
Institutional Sectors								
Government	2,100	81	3,200	135	2,700	14	8,000	45
Finance and Insurance	6,900	271	11,500	450	9,100	47	22,250	125
Manufacturing	8,000	315	12,200	540	10,600	55	36,000	200
Utilities	250	9	350	14	400	2	900	5
Transportation	500	18	700	25	600	3	1,750	10
Communications	500	18	700	25	600	3	1,750	10
Retailing and wholesaling	2,900	108	4,300	160	3,600	18	10,700	60
Health care	250	9	350	14	300	2	900	5
Educational establishments	250	9	350	14	10,300	4	20,900	12
Research institutions	250	9	350	14	300	2	900	5
Other institutional buyers	1,300	55	2,800	84	1,800	7	5,050	19
Subtotal	23,200	902	36,800	1,475	40,300	157	109,100	496
Professional/consumer sectors								
Physicians	90	1	250	4	100	1	1,600	9
Attorneys	90	1	250	4	100	1	1,300	9
Accountants	500	12	700	15	2,500	12	4,000	20
Management and engineering consultants	500	12	750	17	3,000	14	5,000	27
Other professions	120	2	250	5	2,000	10	4,000	18
Consumer	—	—	—	—	82,000	40	185,000	101
Subtotal	1,300	28	2,200	45	89,700	78	200,900	184
Total	24,500	930	39,000	1,520	130,000	235	310,000	680

[1] Excluding costs of software, hardware maintenance, sales commissions, etc.

Source: See source notation of table 1.

Additional Information

The project officers responsible for Country Market Surveys on mini and micro computer systems are:

Andrew Bihun,
Anita L. Shrestha
Market Analysis Branch
International Trade Administration
U.S. Department of Commerce
Washington, D.C. 20230

The Survey summarizes a 53-page International Market Research (IMR) report prepared by Directa S.r.l. in Italy under contract for the U.S. Department of Commerce and reflects the opinions and views of interviewees in Italy and not necessarily those of the Department of Commerce. The IMR report gives considerably more detail on all the points touched upon in the Survey.

For a free copy of the latest catalog of Market Research reports, which lists all Country Market Surveys and selected International Market Research reports, including the one described above, please write to:

International Market Research Services
Export Promotion Services
Office of Information Product Development and Distribution
P.O. Box 14207
U.S. Department of Commerce
Washington, D.C. 20044